

Results on different datasets

AMultiGCLSTM Version

Version Name	Temporal Feature Process	Temporal Merge Method	Multi-Graph Merge Method	Parameter Complexity
AMulti-GCLSTM-V1	GCLSTM	GAL	GAL	
AMulti-GCLSTM-V2	GCLSTM	Concat+Dense	GAL	
AMulti-GCLSTM-V3	RGAL	GAL	GAL	

以下实验中，除了标记了（已做参数搜索），其他均未做参数搜索

Results on Bike

	NYC	Chicago	DC
HM（已做参数搜索）	3.99224 (C1-P1-T3)	2.97693 (C1-P1-T2)	2.63165 (C2-P1-T3)
XGBoost	4.14909	3.02530	2.73286
GBRT	3.94348	2.85847	2.63935
LSTM	3.78497	2.79078	2.54752
DG-GCLSTM	3.63207	2.71876	2.53863
IG-GCLSTM	3.78816	2.70131	2.46214
CG-GCLSTM	3.69656	2.79812	2.45815
AMulti-GCLSTM-V1	3.50475	2.65511	2.42582
AMulti-GCLSTM-V2	3.43870	2.66379	2.41111

Results on DiDi

	参数搜索范围	Xi'an	Chengdu
HM	"CT": {"_type": "randint", "_value": [0, 6]} "PT": {"_type": "randint", "_value": [0, 7]} "TT": {"_type": "randint", "_value": [0, 4]}	6.19809	7.35477
XGBoost	"max_depth": {"_type": "randint", "_value": [1, 20]} "num_boost_round": {"_type": "randint", "_value": [50, 300]}	6.58816	7.81596
GBRT		8.15679	7.58014
LSTM			
DG-GCLSTM			
IG-GCLSTM			
CG-GCLSTM			
AMulti-GCLSTM-V1		5.88538 (已对Graph构参数进行搜索)	7.13728
AMulti-GCLSTM-V2		5.90493	7.03252
AMulti-GCLSTM-V3			

Results on Metro

	Chongqing	Shanghai
HM (已做参数搜索)	120.3116	197.9747
XGBoost (已做参数搜索)	118.0798	190.2446
GBRT (已做参数搜索)	122.8662	185.9844
CPT-LSTM	99.5716	194.5480
DG-GCLSTM	99.5361	199.1488
IG-GCLSTM (line)	101.1115	159.0944
CG-GCLSTM	98.5321	185.0774
AMulti-GCLSTM-V1	98.3840	170.7830
AMulti-GCLSTM-V2	96.31608	154.59911
AMulti-GCLSTM-V3		

以下结果待整理

Metro Chongqing AMultiGCLSTM_V2_D_K0L1_V2
 Number of trainable variables 58690
 Test result [105.65234712535701, 0.2545523403057227]

Metro Chongqing AMultiGCLSTM_V2_D_K1L1_V2
 Number of trainable variables 58693
 Test result [112.33960270461257, 0.40374120883167647]

Metro Chongqing AMultiGCLSTM_V2_l_K1L1_V2
 Number of trainable variables 58693
 Test result [105.91747791948298, 0.25791858811799]

Metro Chongqing AMultiGCLSTM_V2_C_K1L1_V2
 Number of trainable variables 58693
 Test result [112.97357984219778, 0.3869267307557338]

Metro Chongqing AMultiGCLSTM_V2_DlC_K1L1_V2
 Number of trainable variables 180561
 Test result [96.31608920493976, 0.2666995133247486]

Metro ShanghaiV1 AMultiGCLSTM_V2_D_K0L1_V2
 Number of trainable variables 58690
 Test result [189.92262158079583, 0.12731130479655822]

Metro ShanghaiV1 AMultiGCLSTM_V2_D_K1L1_V2
 Number of trainable variables 58693
 Test result [186.0371212508715, 0.15392561472750804]

Metro ShanghaiV1 AMultiGCLSTM_V2_l_K1L1_V2
 Number of trainable variables 58693
 Test result [185.05749033560113, 0.18560633686281308]

Metro ShanghaiV1 AMultiGCLSTM_V2_C_K1L1_V2
 Number of trainable variables 58693
 Test result [184.81174520758032, 0.16507430693288]

Metro ShanghaiV1 AMultiGCLSTM_V2_DlC_K1L1_V2
 Number of trainable variables 180561
 Test result [154.59911616499195, 0.13682135383499028]

Results on Charge–Station

	Beijing
HM	1.13594
XGBoost	0.98561
GBRT	0.98317
CPT–LSTM	0.81497
DG–GCLSTM	0.83583
CG–GCLSTM	0.80491
AMulti–GCLSTM–V1	0.81599
AMulti–GCLSTM–V2	0.81915